

8101 DUMBBELL  
       392677 SHAPED  
       1099376 OLIGO?  
 S1      51 (DUMBBELL (3N) SHAPED) (S) OLIGO?  
 ?rd  
 ...examined 50 records (50)  
 ...completed examining records  
       S2      29 RD (unique items)  
 ?show files;ds;t/3,k/all  
 File 5: Biosis Previews(R) 1969-2004/Feb W4  
       (c) 2004 BIOSIS  
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 File 8: Ei Compendex(R) 1970-2004/Feb W3  
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       (c) 2004 The HW Wilson Co.  
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 File 144: Pascal 1973-2004/Feb W4  
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 File 155: MEDLINE(R) 1966-2004/Feb W4  
       (c) format only 2004 The Dialog Corp.  
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       (c) 2004 Elsevier Science B.V.  
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       (c) 2004 DECHEMA  
 File 357: Derwent Biotech Res. 1982-2004/Mar W1  
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       (c) 2004 DECHEMA  
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       (c) 2004 Reed Business Information Ltd.  
 File 370: Science 1996-1999/Jul W3  
       (c) 1999 AAAS  
 File 399: CA SEARCH(R) 1967-2004/UD=14010  
       (c) 2004 American Chemical Society  
 File 434: SciSearch(R) Cited Ref Sci 1974-1989/Dec  
       (c) 1998 Inst for Sci Info  
 File 40: Enviroline(R) 1975-2004/Dec  
 File 50: CAB Abstracts 1972-2004/Jan  
       (c) 2004 CAB International  
 File 103: Energy SciTec 1974-2004/Feb B2  
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 File 156: ToxFile 1965-2004/Feb W5  
       (c) format only 2004 The Dialog Corporation  
 File 162: Global Health 1983-2004/Jan  
       (c) 2004 CAB International  
 File 305: Analytical Abstracts 1980-2004/Jan W3  
       (c) 2004 Royal Soc Chemistry  
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 (c) 2004 Sport Information Resource Centre  
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 2001 (c) Action Potential  
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 (c) 2004 The Gale Group  
 File 159:Cancerlit 1975-2002/Oct  
 (c) format only 2002 Dialog Corporation  
 File 164:Allied & Complementary Medicine 1984-2004/Feb  
 (c) 2004 BLHCIS  
 File 444:New England Journal of Med. 1985-2004/Feb W5  
 (c) 2004 Mass. Med. Soc.  
 File 467:ExtraMED(tm) 2000/Dec  
 (c) 2001 Informania Ltd.

Set	Items	Description
S1	51	(DUMBBELL (3N) SHAPED) (S) OLIGO?
S2	29	RD (unique items)

>>>KWIC option is not available in file(s): 399

2/3,K/1 (Item 1 from file: 5)  
 DIALOG(R)File 5:Biosis Previews(R)  
 (c) 2004 BIOSIS. All rts. reserv.

0014688372 BIOSIS NO.: 200400055902  
**No enhancement of nuclear entry by direct conjugation of a nuclear localization signal peptide to linearized DNA.**  
 AUTHOR: Tanimoto Mitsuhide; Kamiya Hiroyuki; Minakawa Noriaki; Matsuda Akira; Harashima Hideyoshi (Reprint)  
 AUTHOR ADDRESS: Graduate School of Pharmaceutical Sciences, Hokkaido University, Kita-12, Nishi-6, Kita-ku, Sapporo, 060-0812, Japan\*\*Japan  
 AUTHOR E-MAIL ADDRESS: harasima@pharm.hokudai.ac.jp  
 JOURNAL: Bioconjugate Chemistry 14 (6): p1197-1202 November-December 2003  
 2003  
 MEDIUM: print  
 ISSN: 1043-1802 \_(ISSN print)  
 DOCUMENT TYPE: Article  
 RECORD TYPE: Abstract  
 LANGUAGE: English

...ABSTRACT: we prepared three dumbbell-shaped, green fluorescent protein (GFP)-encoding DNAs containing one or two NLS peptides. The peptide was conjugated to the loop-forming \*oligodeoxyribonucleotides\* by cross-linking reactions between the peptide and a modified uracil base with a dioxaoctylamino linker, and the \*oligonucleotides\* were then ligated to the DNA molecules. The NLS-conjugated DNA dumbbells were microinjected into the cytosols and nuclei of simian COS-7 cells. In...

2/3,K/2 (Item 2 from file: 5)  
 DIALOG(R)File 5:Biosis Previews(R)  
 (c) 2004 BIOSIS. All rts. reserv.

0014124886 BIOSIS NO.: 200300083605  
**Generation of single-strand circular DNA from linear self-annealing segments**  
 AUTHOR: Abarzua Patricio (Reprint)  
 AUTHOR ADDRESS: West Caldwell, NJ, USA\*\*USA  
 JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1265 (4): Dec. 24, 2002 2002  
 MEDIUM: e-file  
 PATENT NUMBER: US 6498023 PATENT DATE GRANTED: December 24, 2002 20021224  
 PATENT CLASSIFICATION: 435-912 PATENT ASSIGNEE: Molecular Staging, Inc.  
 PATENT COUNTRY: USA  
 ISSN: 0098-1133 \_(ISSN print)  
 DOCUMENT TYPE: Patent

RECORD TYPE: Abstract  
LANGUAGE: English

...ABSTRACT: of single-stranded DNA circles having a predetermined size and nucleotide sequence using pre-designed hairpin oligonucleotides containing complementary sequences for directing ligation to form \*dumbbell\*-shaped monomers followed by heat denaturation to yield single-stranded DNA circles.

2/3,K/3 (Item 3 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2004 BIOSIS. All rts. reserv.

0013130138 BIOSIS NO.: 200100301977

**A novel type of minimal size non-viral vector with improved safety properties for clinical trials and enhanced transgene expression: First results**

AUTHOR: Schakowski Frank (Reprint); Buttgereit Peter (Reprint); Gorschluter Marcus (Reprint); Junghans Claas; Schroff Matthias; Wittig Burghardt; Schmidt-Wolf Ingo G H (Reprint)

AUTHOR ADDRESS: Dpt. of General Internal Medicine I, Rheinische Friedrich-Wilhelms University, Bonn, Germany\*\*Germany

JOURNAL: Blood 96 (11 Part 2): p383b November 16, 2000 2000

MEDIUM: print

CONFERENCE/MEETING: 42nd Annual Meeting of the American Society of Hematology San Francisco, California, USA December 01-05, 2000; 20001201

SPONSOR: American Society of Hematology

ISSN: 0006-4971

DOCUMENT TYPE: Meeting; Meeting Abstract

RECORD TYPE: Abstract

LANGUAGE: English

...ABSTRACT: expression cassette, including promotor, gene and RNA-stabilizing sequence, flanked by two short hairpin oligonucleotide sequences. The resulting vector is a small linear, covalently closed, \*dumbbell\*-shaped molecule. We transfected colon carcinoma cell lines by electroporation and cationic complexes (e.g. branched polyethylenimine, lipofectamine) with MIDGE vectors and corresponding plasmids containing transgenes...

2/3,K/4 (Item 4 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2004 BIOSIS. All rts. reserv.

0009269963 BIOSIS NO.: 199497291248

**Interaction of collagen with hydrophobic protein granules in the egg capsule of the dogfish Scyliorhinus canicula**

AUTHOR: Knight D P; Feng D

AUTHOR ADDRESS: Dep. Biol. Sci., King Alfred's Coll., Sparkford Road, Winchester, Hants SO22 4NR, UK\*\*UK

JOURNAL: Tissue and Cell 26 (2): p155-167 1994 1994

ISSN: 0040-8166

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

...ABSTRACT: a dumbbell-shaped unit approximately 35 nm long with hydrophobic groups concentrated at the ends. This unit may represent a dumbbell-shaped molecule or an \*oligomer\* of two or more molecules lying parallel with one another in a head-to-tail arrangement. Such a unit can be readily incorporated into models...

2/3,K/5 (Item 5 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)

(c) 2004 BIOSIS. All rts. reserv.

0008761380 BIOSIS NO.: 199395063646

**Molecular shape of dystrophin**

AUTHOR: Sato Osamu; Nonomura Yoshiaki; Kimura Sumiko; Maruyama Koscak  
(Reprint)

AUTHOR ADDRESS: Dep. Biol., Fac. Sci., Chiba Univ., Inage-ku, Chiba 263,  
Japan\*\*Japan

JOURNAL: Journal of Biochemistry (Tokyo) 112 (5): p631-636 1992

ISSN: 0021-924X

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

...ABSTRACT: dystrophin preparations. When the sample was subjected to gel filtration, dystrophin oligomers were isolated just after the void volume and the fraction largely consisted of \*dumbbell\*-shaped\* molecules. From various rotary-shadowed images, it was suggested that dystrophin is a rod with spheres at both ends, approximately 110 nm long and 2...

...this monomer binds to another monomer in a staggered way, forming a dimer, and the dimers associate with each other side-by-side, forming a \*dumbbell\*-shaped\* tetramer, 130 nm long and 5 nm wide. The tetramers form an end-to-end aggregate. It seemed that the dumbbell structure was not affected...

2/3,K/6 (Item 6 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2004 BIOSIS. All rts. reserv.

0008722012 BIOSIS NO.: 199395024278

**On Megaceros aenigmaticus Schust**

AUTHOR: Schuster R M

AUTHOR ADDRESS: Cryptogamic Lab., Hadley, Mass. 01035, USA\*\*USA

JOURNAL: Bryologist 95 (3): p305-315 1992

ISSN: 0007-2745

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

...ABSTRACT: purely female clonal populations, isolated in limited environments in western, North Carolina (USA) to South Carolina, along small rills, is probably a recent (surely post-Oligocene\*, perhaps post-Pliocene) phenomenon. Extinction of the male sex is shown to be matched in a number of other cases in the Appalachian system.

2/3,K/7 (Item 7 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0006766137 BIOSIS NO.: 198988081252

**CONSTRUCTION OF A 42 BASE PAIR DOUBLE STRANDED DNA MICROCIRCLE**

AUTHOR: WOLTERS M (Reprint); WITTIG B

AUTHOR ADDRESS: INST FUER MOLEKULARBIOL UND BIOCHEM, FREIE UNIV BERLIN,  
D-1000 BERLIN 33, ARNIMALLEE 22, FRG\*\*WEST GERMANY

JOURNAL: Nucleic Acids Research 17 (13): p5163-5172 1989

ISSN: 0305-1048

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

...ABSTRACT: double stranded DNA microcircles is described that overcomes the natural limits of established circularization procedures. Starting with two synthetic oligonucleotides which are able to form \*dumbbell\*-shaped\* structures, two subsequent ligation reactions yield a

microcircle of double stranded DNA of 42 base pairs. This is by far the smallest circle of double...

2/3,K/8 (Item 1 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
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06562017 E.I. No: EIP03427671883

**Title: Mechanically linked polyrotaxanes: A stepwise approach**  
Author: Werts, Michel P.L.; Van Den Boogaard, Maarten; Tsivgoulis, Gerasimos M.; Hadziioannou, George  
Corporate Source: Department of Polymer Chemistry Department of Materials Sci. Ctr. University of Groningen, 9747 AG Groningen, Netherlands  
Source: Macromolecules v 36 n 19 Sep 23 2003. p 7004-7013  
Publication Year: 2003  
CODEN: MAMOBX ISSN: 0024-9297  
Language: English

...Abstract: was developed. Two variations of rotaxane monomers were synthesized, based on diphenylmethane and tetraphenylmethane blocking groups. Both rotaxanes bear a protected phenol functionality in the \*dumbbell\*-shaped part and a protected carboxylic acid functionality in the cyclic component. Via a "stepwise" polymerization, a rotaxane dimer and a rotaxane tetramer have been obtained...

...functional groups in separate batches and a subsequent coupling reaction of the produced monofunctional/monoprotected monomers so that a dimer is formed. Longer and monodisperse \*oligomers\* can easily be obtained by repetition of this procedure. In addition, deprotection of both functionalities in the dimer and subsequent esterification resulted in the formation...

2/3,K/9 (Item 2 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
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05607900 E.I. No: EIP00075246316

**Title: Unexpected dimerization of oxidized fullerene-oligothiophene-fullerene triads**  
Author: Apperloo, Joke J.; Langeveld-Voss, Bea M.W.; Knol, Jopp; Hummelen, J.C.; Janssen, Rene A.J.  
Corporate Source: Eindhoven Univ of Technology, Eindhoven, Neth  
Source: Advanced Materials v 12 n 12 2000. p 908-911  
Publication Year: 2000  
CODEN: ADVMEW ISSN: 0935-9648  
Language: English

Abstract: Oxidized states of well-defined pi-conjugated \*oligomers\* serve as models for charge carriers and contribute to the understanding of the nature and spectroscopic characteristics of polarons and bipolarons in conducting polymers. Two \*dumbbell\*-shaped fullerene-oligothiophene-fullerene triads were synthesized, oxidized and studied in relation to those of the \*oligothiophenes\*. Results indicate that despite the anticipated steric inhibition of a face-to-face interaction between the \*oligothiophene\* moieties, the radical cations of the fullerene-substituted \*oligothiophenes\* show a much stronger tendency to dimerize than the non-capped \*oligomers\*. 12 Refs.

2/3,K/10 (Item 1 from file: 34)  
DIALOG(R)File 34: SciSearch(R) Cited Ref Sci  
(c) 2004 Inst for Sci Info. All rts. reserv.

10934921 Genuine Article#: 585KX No. References: 98

**Title: A comprehensive approach to the study of methane-seep deposits from**

**the Lincoln Creek Formation, western Washington State, USA**

Author(s): Peckmann J (REPRINT) ; Goedert JL; Thiel V; Michaelis W; Reitner J

Corporate Source: Univ Bremen, FB Geowissensch, Postfach 330440/D-28334 Bremen//Germany/ (REPRINT); Univ Reading, Postgrad Res Inst Sedimentol, Reading RG6 6AB/Berks/England/; Univ Washington, Burke Museum Nat Hist & Culture, Seattle//WA/98195; Univ Hamburg, Inst Biogeochem & Meereschem, D-20146 Hamburg//Germany/; Univ Gottingen, Gottinger Zentrum Geowissensch, D-37077 Gottingen//Germany/

Journal: SEDIMENTOLOGY, 2002, V49, N4 (AUG), P855-873

ISSN: 0037-0746 Publication date: 20020800

Publisher: BLACKWELL PUBLISHING LTD, P O BOX 88, OSNEY MEAD, OXFORD OX2 ONE, OXON, ENGLAND

Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

...Abstract: palaeontology, petrography, stable isotope geochemistry and biomarker analyses was applied to the study of seven small methane-seep carbonate deposits. These deposits are in the \*Oligocene\* part of the Lincoln Creek Formation, exposed along the Canyon and Satsop Rivers in western Washington. Each deposit preserves invertebrate fossils, many representing typical seep...

...methane. Small filaments preserved in the carbonate may represent methanotrophic archaea. Archaeal methanogenesis induced the formation of a late diagenetic phase, brownish calcite, consisting of \*dumbbell\*-shaped\* crystal aggregates that exhibit delta(13)C values as high as +7parts per thousand PDB. Clotted microfabrics of primary origin point to microbial mediation of...

2/3,K/11 (Item 1 from file: 71)

DIALOG(R)File 71:ELSEVIER BIOBASE

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02350197 2003138397

**Occurrence and life cycles of Dermocystidium species (Mesomycetozoa) in the perch (*Perca fluviatilis*) and ruff (*Gymnocephalus cernuus*) (Pisces: Perciformes) in Finland and Estonia**

Pekkarinen M.; Lotman K.

ADDRESS: M. Pekkarinen, Department of Biosciences, Division of Animal Physiology, University of Helsinki, P.O. Box 17, FIN-00014 Helsinki, Finland

EMAIL: Marketta.Pekkarinen@helsinki.fi

Journal: Journal of Natural History, 37/10 (1155-1172), 2003, United Kingdom

PUBLICATION DATE: May 20, 2003

CODEN: JNAHA

ISSN: 0022-2933

DOCUMENT TYPE: Article

LANGUAGES: English SUMMARY LANGUAGES: English

NO. OF REFERENCES: 20

...stages are studied here. In occasional sampling during 1995-1998 and 2001, and more systematic sampling during 1999 and 2000 in two different lakes (one \*oligotrophic\*, the other slightly eutrophic), it was found to occur almost continuously, although sometimes very sparsely, in both lakes. The life cycle is maintained from year...

...the ruff, too. In perch in Finland, cysts were found differing from the longish and thin-walled cysts typical of *D. percae*. These roundish to \*dumbbell\*-shaped\* cysts with thicker walls are here suggested to belong to a different *Dermocystidium* species, called *D. sp.* Cysts of *D. percae* occurred in the skin...

2/3,K/12 (Item 2 from file: 71)

DIALOG(R)File 71:ELSEVIER BIOBASE

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01953579 2002034008

**Foldamers as dynamic receptors: Probing the mechanism of molecular association between helical oligomers and rodlike ligands**

Tanatani A.; Hughes T.S.; Moore J.S.

ADDRESS: Prof. J.S. Moore, Roger Adams Laboratory, Department of Chemistry, University of Illinois, 600 South Mathews Avenue, Urbana, IL 61801, United States

EMAIL: moore@scs.uiuc.edu

Journal: Angewandte Chemie - International Edition, 41/2 (325-328), 2002, Germany

PUBLICATION DATE: January 18, 2002

CODEN: ACIEA

ISSN: 1433-7851

DOCUMENT TYPE: Article

LANGUAGES: English SUMMARY LANGUAGES: English

NO. OF REFERENCES: 28

A dynamic binding mechanism allows the association of \*dumbbell\*-\*shaped\* ligand 2 with helical folded \*oligo\*(m-phenyleneethynylene)s 1 (see schematic representation). Association constants are \*oligomer\* length specific, with a maximum value for the icosamer and docosamer. These \*oligomers\* have helical conformations that are highly shape-complementary to 1; shorter and longer \*oligomers\* exhibit association constants roughly an order of magnitude smaller.

2/3,K/13 (Item 3 from file: 71)

DIALOG(R)File 71:ELSEVIER BIOBASE

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00082130 94042816

**Precursor sequence, processing, and urothelium-specific expression of a major 15-kDa protein subunit of asymmetric unit membrane**

Lin J.-H.; Wu X.-R.; Kreibich G.; Sun T.-T.

ADDRESS: T.-T. Sun, Ronald O. Perleman Dermatology Dept., New York Univ. School of Medicine, 566 First Ave., New York, NY 10016, United States

Journal: Journal of Biological Chemistry, 269/3 (1775-1784), 1994, United States

PUBLICATION DATE: 19940000

CODEN: JBCHA

ISSN: 0021-9258

DOCUMENT TYPE: Article

LANGUAGES: English SUMMARY LANGUAGES: English

...specialized biomembrane elaborated by terminally differentiated urothelial cells. It contains quasi-crystalline arrays of 12-nm protein particles each of which is composed of six \*dumbbell\*-\*shaped\* subdomains. In this paper we describe the precursor sequence, processing and in vitro membrane insertion properties of bovine uroplakin II (UPII), a 15-kDa major

...a 19-kDa precursor, which loses its signal peptide upon insertion into added microsomes; this process is accompanied by the acquisition of high mannose-type \*oligosaccharides\* giving rise to a 28-kDa precursor which is completely protected from the digestion by exogenous proteases. These results, together with the presence of a...

2/3,K/14 (Item 1 from file: 73)

DIALOG(R)File 73:EMBASE

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11831300 EMBASE No: 2002401320

**Synthesis of \*dumbbell\*-\*shaped\* bis-(pyrazolino[60] fullerene)-\*oligophenylenevinylene\* derivatives**

Gomez-Escalonilla M.J.; Langa F.; Rueff J.-M.; Oswald L.; Nierengarten J.-F.

F. Langa, Facultad de Cie. del Medio Ambiente, Universidad de Castilla-La Mancha, 45071 Toledo Spain

AUTHOR EMAIL: flanga@amb-to.uclm.es

Tetrahedron Letters ( TETRAHEDRON LETT. ) (United Kingdom) 14 OCT 2002

, 43/42 (7507-7511)

CODEN: TELEA ISSN: 0040-4039

PUBLISHER ITEM IDENTIFIER: S0040403902017690

DOCUMENT TYPE: Journal ; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 29

**Synthesis of \*dumbbell\*-\*shaped\* bis-(pyrazolino[60]fullerene)-  
\*oligophenylenevinylene\* derivatives**

Symmetrically substituted oligophenylenevinylene (OPV) derivatives bearing terminal p-nitrophenyl-hydrazone groups have been prepared and used for the synthesis of \*dumbbell\*-\*shaped\* bis-(pyrazolino[60]fullerene)-OPV systems. (c) 2002 Elsevier Science Ltd. All rights reserved.

2/3,K/15 (Item 2 from file: 73)

DIALOG(R)File 73:EMBASE

(c) 2004 Elsevier Science B.V. All rts. reserv.

04259894 EMBASE No: 1990142437

**Molecular architecture of basement membranes**

Yurchenco P.D.; Schittny J.C.

Department of Pathology, UMDNJ, Robert W. Johnson Medical Sch, 675 Hoes Lane, Piscataway, NJ 08854 United States

FASEB Journal ( FASEB J. ) (United States) 1990, 4/6 (1577-1590)

CODEN: FAJOE ISSN: 0892-6638

DOCUMENT TYPE: Journal; Review

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

...a covalently stabilized polygonal framework. Laminin, a four-armed glycoprotein, self-assembles through terminal-domain interactions to form a second polymer network, Entactin/nidogen, and \*dumbbell\*-\*shaped\* sulfated glycoprotein, binds laminin near its center and interacts with type IV collagen, bridging the two. A large heparan sulfate proteoglycan, important for charge-dependent molecular sieving, is firmly anchored in the basement membrane and can bind itself through a core-protein interaction to form dimers and \*oligomers\* and bind laminin and type IV collagen through its glycosaminoglycan chains. Heterogeneity of structure and function occur in different tissues, in development, and in response...

2/3,K/16 (Item 1 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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03565731 JICST ACCESSION NUMBER: 98A0457039 FILE SEGMENT: JICST-E

**Construction of Supramolecular Structures via. Hydrogen Bonds. Noncovalent  
Construction of Crystalline Fibers and Microtubes via Multiple Hydrogen  
Bonds.**

SHIMIZU TOSHIMI (1)

(1) National Inst. Materials and Chemical Res.

Hyomen Kagaku(Journal of the Surface Science Society of Japan), 1998,

VOL.19,NO.4, PAGE.222-229, FIG.16, REF.28

JOURNAL NUMBER: F0940BAL ISSN NO: 0388-5321

UNIVERSAL DECIMAL CLASSIFICATION: 544.142/.144

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Commentary

MEDIA TYPE: Printed Publication



...ABSTRACT: to be fluidlike. This character is quite different from that of usual 3-D crystals. In this paper, self-assembling properties and morphologies of synthetic \*dumbbell\*-\*shaped\* amphiphiles (bolaamphiphiles) have been discussed. In particular, the effect of multiple hydrogen bonds on the supramolecular structures were commented. The D-glucose- and \*oligoglycine\*-based bolaamphiphiles self-assembled in water to form well-defined fibrous and vesicle-encapsulated tubular assemblies, respectively. The formation strongly depends on the length and...

2/3,K/17 (Item 1 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

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15596719 PMID: 14764936

**Evaluation of different conditions for ligating dumbbell-shaped \*oligonucleotides\*.**

Yamagiwa Hiroshi; Bolander Mark E; Sarkar Gobinda  
Dept of Orthopedic Surgery, Mayo Clinic, 200 First Street SW, Rochester, MN; Division of Orthopedic Surgery, Dept of Regenerative and Transplant Medicine, Niigata Univ Graduate School of Medical and Dental Science, 1-757 Asahimachidori, Niigata, Japan.

Molecular biotechnology (United States) Feb 2004, 26 (2) p111-6,  
ISSN 1073-6085 Journal Code: 9423533

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: In Data Review

**Evaluation of different conditions for ligating dumbbell-shaped \*oligonucleotides\*.**

... ligation conditions (37 degrees C for 30 min, 16 degrees C for 24 h, and 4 degrees C for 48 h) to generate dumbbell-shaped \*oligonucleotides\* (ODNs) as transcription factor decoys for SOX9 and alphaA-crystallin binding protein 1 (CRYBP1), which are positive and negative transcriptional regulators for type II collagen...

... more acceptable results for this ODN than incubation for a longer time. These data suggest that different ligation conditions should be tested prior to creating \*dumbbell\*-\*shaped\* ODNs for transfection experiments.</P>

2/3,K/18 (Item 2 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

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11278003 PMID: 11356084

**A novel minimal-size vector (MIDGE) improves transgene expression in colon carcinoma cells and avoids transfection of undesired DNA.**

Schakowski F; Gorschluter M; Junghans C; Schroff M; Buttgereit P; Ziske C; Schottker B; Konig-Merediz S A; Sauerbruch T; Wittig B; Schmidt-Wolf I G  
Department of Internal Medicine I, University of Bonn, 53105 Bonn, Germany.

Molecular therapy - the journal of the American Society of Gene Therapy (United States) May 2001, 3 (5 Pt 1) p793-800, ISSN 1525-0016  
Journal Code: 100890581

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

... expression cassette, including promoter, gene, and RNA-stabilizing sequence, flanked by two short hairpin oligonucleotide sequences. The resulting vector is a small, linear, covalently closed, \*dumbbell\*-\*shaped\* molecule. DNA not encoding the desired gene is reduced to a minimum. Here,

we transfected colon carcinoma cell lines using cationic lipid, cationic polymer, and...

2/3,K/19 (Item 1 from file: 357)

DIALOG(R)File 357:Derwent Biotech Res.

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0299764 DBR Accession No.: 2003-01548 PATENT

**Antitumor vaccine, useful for treating or preventing e.g. renal carcinoma, comprises tumor cells transfected to express interleukin-7 and macrophage activator - vector-mediated gene transfer and expression in host cell for nucleic acid vaccine and gene therapy**

AUTHOR: WITTIG B; SCHMIDT-WOLF I; DORBIC T

PATENT ASSIGNEE: MOLOGEN FORSCH ENTWICKLUNGS and VERTRIEBS 2002

PATENT NUMBER: WO 200260476 PATENT DATE: 20020808 WPI ACCESSION NO.:

2002-599826 (200264)

PRIORITY APPLIC. NO.: DE 1005421 APPLIC. DATE: 20010131

NATIONAL APPLIC. NO.: WO 2002DE380 APPLIC. DATE: 20020130

LANGUAGE: German

...ABSTRACT: a polyadenylation sequence, with a short section of single-stranded nucleic acid at each end to close the loop. Preferred vaccine: This includes an immunostimulatory \*oligodeoxyribonucleotide\* (ON) as adjuvant, particularly one that includes the fragment of formula (F1) and is formed from a circular strand of DNA having an at least partly complementary, antiparallel base sequence and \*shaped\* as a \*dumbbell\*. (F1) is present in a single-stranded region and ON contains 40-200 nucleotides. ON increases activity of natural killer cells and macrophages and strongly...

2/3,K/20 (Item 2 from file: 357)

DIALOG(R)File 357:Derwent Biotech Res.

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0273830 DBR Accession No.: 2001-14037 PATENT

**Preparing single-stranded DNA circles, by using pre-designed hairpin \*oligonucleotides\* containing complementary sequences for directing ligation to form \*dumbbell\*-\*shaped\* monomers followed by heat denaturation - DNA primer and T4 DNA-ligase, ampligase or Escherichia coli ligase for DNA synthesis**

AUTHOR: Abarzua P

CORPORATE SOURCE: New Haven, CT, USA.

PATENT ASSIGNEE: Molecular-Staging 2001

PATENT NUMBER: WO 200140516 PATENT DATE: 20010607 WPI ACCESSION NO.:

2001-432655 (2046)

PRIORITY APPLIC. NO.: US 168511 APPLIC. DATE: 19991202

NATIONAL APPLIC. NO.: WO 2000US32370 APPLIC. DATE: 20001128

LANGUAGE: English

**Preparing single-stranded DNA circles, by using pre-designed hairpin \*oligonucleotides\* containing complementary sequences for directing ligation to form \*dumbbell\*-\*shaped\* monomers followed by heat denaturation**

DESCRIPTORS: single-stranded circular DNA synth., hairpin oligonucleotide hybridization, DNA primer, \*dumbbell\*-\*shaped\* monomer, phage T4 DNA-ligase, ampligase, Escherichia coli ligase, rolling circle amplification DNA amplification restriction endonuclease bacterium DNA sequence (Vol.20, No.27)

2/3,K/21 (Item 3 from file: 357)

DIALOG(R)File 357:Derwent Biotech Res.

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0245735 DBR Accession No.: 2000-00225 PATENT

**Production of closed, double-stranded DNA molecules for used in gene therapy or genetic vaccination - covalently closed DNA molecule production, vector plasmid pMTV2-EGFP for use as a nucleic acid vaccine**

AUTHOR: Junghans C

CORPORATE SOURCE: Berlin, Germany.

PATENT ASSIGNEE: Soft-Gene 1999

PATENT NUMBER: DE 19826758 PATENT DATE: 19991021 WPI ACCESSION NO.: 1999-573070 (1949)

PRIORITY APPLIC. NO.: DE 1026758 APPLIC. DATE: 19980615

NATIONAL APPLIC. NO.: DE 1026758 APPLIC. DATE: 19980615

LANGUAGE: German

...ABSTRACT: replicated in bacteria; isolating the construct; cutting out (Ia) with at least one restriction endonuclease (RE1); ligating the product with a hairpin-forming, self-complementary \*deoxyoligonucleotide\* (II) in order to generate a single strand closed at both ends; and incubating the ligation mixture with a 2 restriction-endonucleases (RE2) subsequently, or...

... simultaneously and incubation with an exonuclease (Exo) that is practically specific for free 3' and 5' ends. This new method may be useful for producing \*dumbbell\*-\*shaped\* expression constructs for use in gene therapy or genetic vaccination, i.e. nucleic acid vaccines. In an example, the expression construct used was vector plasmid...

2/3,K/22 (Item 4 from file: 357)

DIALOG(R)File 357:Derwent Biotech Res.

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0171905 DBR Accession No.: 94-14456

**Sequential staining of short oligonucleotides in polyacrylamide gels with ethidium bromide and methylene blue - oligonucleotide staining for differentiation between reactant and production in ligation reaction**

AUTHOR: Lim C S; Hunt C A

CORPORATE AFFILIATE: Univ.California

CORPORATE SOURCE: University of California, San Francisco, CA, USA.

JOURNAL: BioTechniques (17, 4, 626,628) 1994

CODEN: BTNQDO

LANGUAGE: English

ABSTRACT: By using ethidium bromide and methylene blue sequentially, both single- and double-stranded \*oligonucleotides\* can be detected at low concentrations. This sequential staining technique was used to distinguish (on a 19% denaturing acrylamide gel) products from reactants in a ligation reaction where the reactant is a 42-mer single-stranded, intramolecularly annealing \*oligonucleotide\* and the product is a closed, double-stranded, \*dumbbell\*-\*shaped\* \*oligonucleotide\* of the same length. Although the mol.wt. of the product and reactant are similar, they migrate at significantly distinct rates due to their structural difference. This technique has also been used successfully to analyze ligation reactions involving \*oligonucleotides\* with different sequences and lengths. Ethidium bromide helps to distinguish between the reactants (single-stranded) and products (double-stranded) while methylene blue may allow quantitation...

2/3,K/23 (Item 1 from file: 370)

DIALOG(R)File 370:Science

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00508921 (USE 9 FOR FULLTEXT)

**A Giant Protease with Potential to Substitute for Some Functions of the Proteasome**

Geier, Elke; Pfeifer, Guenter; Wilm, Matthias; Lucchiari-Hartz, Maria;

Baumeister, Wolfgang; Eichmann, Klaus; Niedermann, Gabriele<CRF RID="C1">

Max-Planck Institute of Immunobiology, Stuebeweg 51, D-79108 Freiburg, Germany. Max-Planck Institute of Biochemistry, Am Klopferspitz 18a, D-82152 Martinsried, Germany. European Molecular Biology Laboratory, Meyerhofstrasse 1, D-69117 Heidelberg, Germany.

Science Vol. 283 5404 pp. 978

Publication Date: 2-12-1999 (990212) Publication Year: 1999

Document Type: Journal ISSN: 0036-8075

Language: English

Section Heading: REPORTS

Word Count: 2550

(THIS IS THE FULLTEXT)

...Text: as a HMW cytosolic form and is a serine-peptidase of the subtilisin-type that removes tripeptides from the free NH<sub>2</sub>-terminus of \*oligopeptides\* (B8...

...be between 5 and 9 MD. Some variations between individual complexes can be discerned; they appear either ovoid (white box in Fig. 1C, a) or \*dumbbell\*-shaped\* (black box in Fig. 1C, a). Eigenvector-eigenvalue image classification (Fig. 1C, b to e) revealed variations in length (47.2 to 51.7 nm...TPPII removes tripeptides stepwise from the free NH<sub>2</sub>-terminus of \*oligopeptides\* and is classified as a tripeptidyl peptidase (B8) , that is, as an exopeptidase. Although such an enzyme may participate in general protein degradation, it is...

...rationalize the need for TPPII to have an elaborate supramolecular structure. To determine if TPPII has additional proteolytic activities permitting the degradation of polypeptides into \*oligopeptides\*, we studied the digestion of a synthetic 41-amino acid polypeptide corresponding to the ovalbumin amino acid residues 37 to 77 (Fig. 4). Several degradation...

...The physiological functions of cytosolic TPPII are not known. TPPII may play a role in the degradation of \*oligopeptides\*, including cytotoxic T lymphocyte epitopes and epitope precursors, given its high tripeptidyl peptidase activity toward such substrates (B8) . These \*oligopeptides\* are mainly the products of proteasome-mediated proteolysis. Although TPPII is not an obvious molecular homolog of the archaeobacterial Tricorn protease, it may act as...proteasomes (lane 5). (C, a) Electron micrograph of a TPPII preparation negatively stained with uranyl acetate. White box, particle with an ovoid shape; black box, \*dumbbell\*-shaped\* particle. (Inset) Global average of the data set from 1365 individual particles. (b to e) The dominant variances resulting from an eigenvector-eigenvalue image classification...

2/3,K/24 (Item 2 from file: 370)

DIALOG(R)File 370:Science

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00501278 (USE 9 FOR FULLTEXT)

#### **Supramolecular Materials: Self-Organized Nanostructures**

Stupp, S. I.; LeBonheur, V.; Walker, K.; Li, L. S.; Huggins, K. E.; Keser, M.; Amstutz, A.

The authors are in the Department of Materials Science and Engineering, Department of Chemistry, Beckman Institute for Advanced Science and Technology, Materials Research Laboratory, University of Illinois at Urbana-Champaign, Urbana 61801, IL, USA.

Science Vol. 276 5311 pp. 384

Publication Date: 4-18-1997 (970418) Publication Year: 1997

Document Type: Journal ISSN: 0036-8075

Language: English

Section Heading: Research Articles

Word Count: 4701

(THIS IS THE FULLTEXT)

...Text: materials science is the creation of supramolecular materials in which the constituent units are highly regular molecular nanostructures. For organic materials, self-assembly of large \*oligomers\* into supramolecular polymers of 10.sup(2) kD or more has the potential for creating such nanostructures. If necessary for the control of properties, chemical...Crystallization of the identical rodlike segments in the miniature triblock polymer must exclude the chemically diverse \*oligostyryl\* and \*oligoisoprene\* blocks. In our view, the chemical aperiodicity and diversity of these two segments in the triblock population of molecules is an extremely important factor in...

...are identical. Thus, the disruption of chemical regularity in two of the blocks in each triblock molecule predisposes the system to form finite aggregates. The \*oligoisoprene\* segment is conformationally flexible, given that polyisoprene is a rubber at room temperature, and also has a small cross-sectional area relative to the styrene...with similar structures in their chemical repeats have extremely high melting points if they fuse at all before reaching the regime of chemical decomposition. Because \*oligostyrene\* segments have a fairly large cross section, they will encounter strong hard-core repulsive forces when trying to accommodate the nanocrystal's density. These repulsive...

...a favorable molecular arrangement in the units observed. However, the supramolecular units may consist of mushroom-shaped aggregates with molecules arranged in parallel or of \*dumbbell\*-\*shaped\* ones in which only rod segments interdigitate in antiparallel fashion...under 100 angstrom, thus suggesting that the nanostructures self-organize as monolayers and not as bilayers. The observed period of ~70 angstrom rules out the \*dumbbell\*-\*shaped\* supramolecular structure in which only rods are interdigitated, even though this would create more volume for the flexible segments to explore conformational space. However, one...

2/3,K/25 (Item 3 from file: 370)  
DIALOG(R)File 370:Science  
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00500129 (USE 9 FOR FULLTEXT)

**Self-Assembling Dendrimers**

Zimmerman, Steven C.; Zeng, Fanwen; Reichert, David E. C.; Kolotuchin, Sergei V.

Department of Chemistry, 600 South Mathews Avenue, University of Illinois, Urbana, IL 61801, USA.

Science Vol. 271 5252 pp. 1095

Publication Date: 2-23-1996 (960223) Publication Year: 1996

Document Type: Journal ISSN: 0036-8075

Language: English

Section Heading: Reports

Word Count: 2377

(THIS IS THE FULLTEXT)

...Text: dendrimer resides at one end of a hydrophilic polyethyleneoxide polymer aggregate in aqueous solution (B4) and act as surfactants (B6) . Likewise, the hydrophobic linker in \*dumbbell\*-\*shaped\* arborols stack to form rod-shaped assemblies, resulting in gel formation in aqueous solution (B7) . Meijer and co-workers recently reported that dendritic block copolymers...Figure F1

Caption: Schematic representation of two possible hydrogen-bonded aggregates formed by 1: cyclic hexamer 2 and linear \*oligomers\* 3...

2/3,K/26 (Item 1 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
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139230913 CA: 139(15)230913t JOURNAL  
"Molecular magic". Formation of a self-inclusion complex from a  
dumbbell-shaped permethylated .beta.-cyclodextrin derivative  
AUTHOR(S): Yamada, Takashi; Fukuhara, Gaku; Kaneda, Takahiro  
LOCATION: The Institute of Scientific and Industrial Research, Osaka  
University, Osaka, Japan, 567-0047  
JOURNAL: Chem. Lett. (Chemistry Letters) DATE: 2003 VOLUME: 32  
NUMBER: 6 PAGES: 534-535 CODEN: CMLTAG ISSN: 0366-7022 LANGUAGE:  
English PUBLISHER: Chemical Society of Japan

2/3,K/27 (Item 2 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
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107193252 CA: 107(21)193252t JOURNAL  
A dumbbell-shaped, double-hairpin structure of DNA: a thermodynamic  
investigation  
AUTHOR(S): Erie, Dorothy; Sinha, Navin; Olson, Wilma; Jones, Roger;  
Breslauer, Kenneth  
LOCATION: Waksman Inst. Microbiol., Rutgers, State Univ., Piscataway, NJ,  
08854, USA  
JOURNAL: Biochemistry DATE: 1987 VOLUME: 26 NUMBER: 22 PAGES: 7150-9,  
CODEN: BICHAW ISSN: 0006-2960 LANGUAGE: English

2/3,K/28 (Item 1 from file: 35)  
DIALOG(R)File 35:Dissertation Abs Online  
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01424660 ORDER NO: AADAA-I9524221  
**NMR STUDIES OF DNA OLIGOMERS IN SOLUTION**

Author: WU, XINGHAO  
Degree: PH.D.  
Year: 1995  
Corporate Source/Institution: RUTGERS UNIVERSITY THE STATE U. OF NEW  
JERSEY (NEW BRUNSWICK) (0190)  
Source: VOLUME 56/03-B OF DISSERTATION ABSTRACTS INTERNATIONAL.  
PAGE 1451. 197 PAGES

High-resolution nuclear magnetic resonance (NMR) techniques have been  
used to characterize structurally two sets of DNA \*oligomers\* which contain  
the hexameric sequence -GAATTC-, or an isomeric variant of this sequence.  
This region corresponds to the recognition site of the EcoR I restriction  
enzyme. The sequences of the first set of \*oligomers\* studied were  
d(TTCCTnGGAATTCCTnGGAA) (n = 4, 5). Resonance assignment were made for all  
base, C1\$ \sp \prime\$, 2\$ \sp \prime\$, 2\$ \sp {\prime \prime}\$, 3\$ \sp \prime\$,  
imino and some amino protons. The one- and two-dimensional NMR data reveal  
that these \*oligomers\* intramolecularly fold back on themselves to form  
exclusively double-hairpin, \*dumbbell\*-shaped structures, with gaped or  
nicked eight-base-pair stem duplex closed by loops of 4 or 5 T residues.  
The NMR data suggest that the...

...of the core duplex. No structural change of stem duplex results from  
adding a loop (T4 or T5). The sequence of the second set of \*oligomers\*  
studied were d(CCTTAAGG) and d(CCAATTGG) (abbreviated as the CT-mer and the  
CA-mer, respectively). These two octamers are sequence isomers of the  
well-studied DNA d(GGAATTC) octamer. NMR studies on these two \*oligomers\*  
provided an opportunity to characterize if and how sequence variations  
influence DNA structure and thermal stability. In general, our data reveal  
that the CA-mer...

...part, T-A vs. A-T step, of the duplex plays an important role in  
influencing the melting transitions and thermal stability of short DNA  
\*oligomers\*.

2/3,K/29 (Item 2 from file: 35)  
DIALOG(R)File 35:Dissertation Abs Online  
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01384347 ORDER NO: AAD94-31142

**DNA STRUCTURES AND THEIR DRUG BINDING PROPERTIES**

Author: SZWAJKAJZER, DANUTA

Degree: PH.D.

Year: 1994

Corporate Source/Institution: RUTGERS UNIVERSITY THE STATE U. OF NEW  
JERSEY (NEW BRUNSWICK) (0190)

Source: VOLUME 55/07-B OF DISSERTATION ABSTRACTS INTERNATIONAL.  
PAGE 2758. 317 PAGES

Specially designed \*oligonucleotides\* provide a unique opportunity to evaluate the influence of sequence on DNA properties. In this study, we have characterized the conformational, thermal, thermodynamic, and drug binding properties of three families of DNA structures: (1) a family of sequence isomeric octameric DNA duplexes; (2) a family of double-hairpin, \*dumbbell\*-\*shaped\* DNA structures; (3) and a family of 17-mers that form duplexes with modified and unmodified GAATTC sites.

Taken together the first two families have...

?